

OLD FREDERICK ROAD RETAINING WALL PROJECT

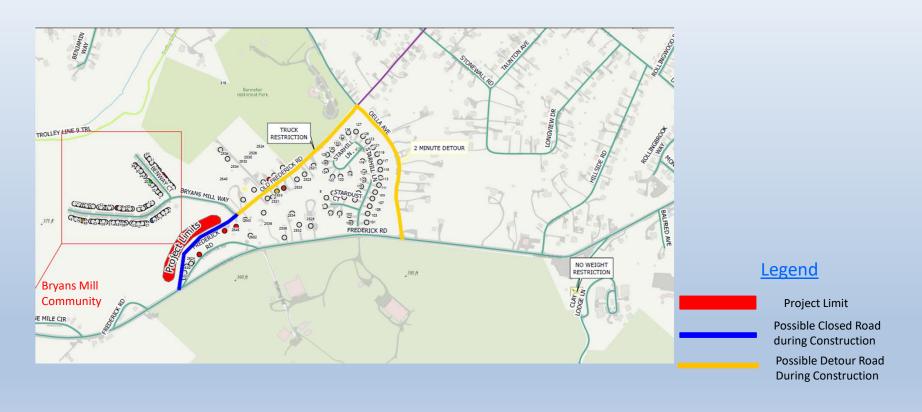
By: Nicholas Smith, PE, Section Chief Hiwotie Wondem, Project Manager

DPW&T, Engineering and Construction
Structural Design Section

October 26, 2023



Project Location and Limits



Existing condition



Looking North

Existing condition



Looking South

Existing condition



Typical Slope Erosion

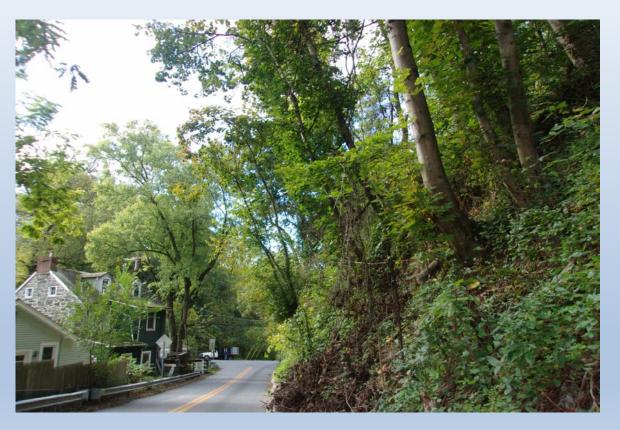
Overview

- The project limit along Old Frederick Rd between Bryans Mill Way and Frederick Road is approximately 1,000 ft.
- The project will focus on the safety of the public by addressing slope stability and traffic flow.
- The following actions will be taken to achieve our goals:
 - Remove trees that present a safety concern
 - Design & build a retaining wall
 - Regrade the slope
 - Analyze the data from traffic studies
 - Revise the roadway cross section

Trees

Trees on the slope area which present safety concerns to either the traveling public or the properties across the street will be removed based on the recommendation of the appropriate County departments.

Existing Trees on the slope



Existing Trees on the slope



Retaining Wall

A retaining wall will be designed and constructed along the West side of Old Frederick Road between Frederick Road and Bryans Mill Way. The length, height, and type of wall will be determined based on the functionality of the wall, the topography of the area, and contribution to the aesthetics of the area.

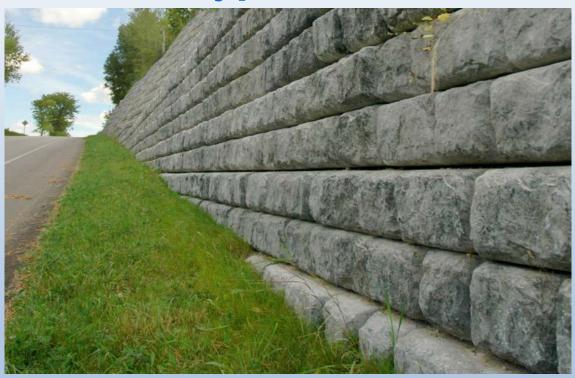


Possible Type of Wall



Concrete Wall

Possible Type of Wall



Dressed Stone Wall

Possible Type of Wall



Modular Block Wall

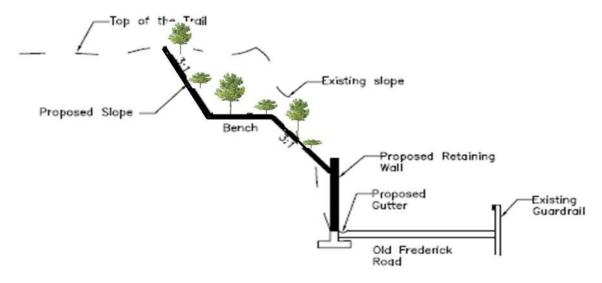
Grading

Grading of the slope behind the retaining wall will be included in the scope of the project. The grading work will improve the stability of the slope and may reduce the amount of runoff reaching the wall from the top of the slope.





POSSIBLE GRADING CROSS SECTION

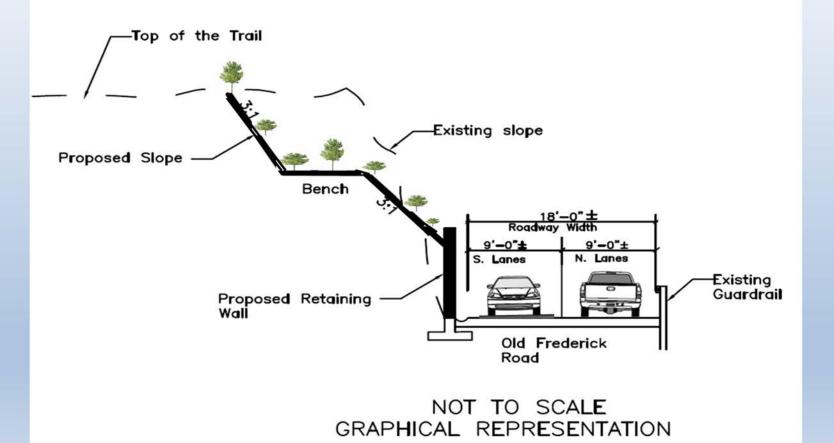


NOT TO SCALE GRAPHICAL REPRESENTATION

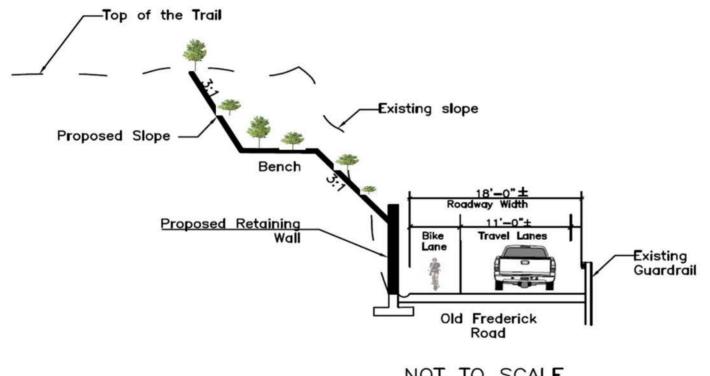


- As part of earlier planning efforts, a traffic study of the area was completed and community input was solicited regarding the future roadway condition.
- As a result of the data collected, Old Frederick Road will remain open for vehicular traffic after construction.
- Following further analysis of the traffic study data, the County will determine whether one-way or two-way traffic is appropriate for Old Frederick Road between Frederick Road and Bryans Mill Way.
- Analysis will account for issues such as modern AASHTO standard lane widths and providing space for the proposed retaining wall.

TWO-WAY ROAD CROSS SECTION



ONE-WAY ROAD CROSS SECTION



NOT TO SCALE
GRAPHICAL REPRESENTATION

Design and Construction

Once the preliminary studies and analysis are completed and the best alternative is selected, the anticipated time required for the design and construction of this project will be 18 to 24 months.



THANK YOU

Q & A

